

# Systems Pre-Test

**Instructions:** Answer these multiple choice questions.

1. The intersection of two lines is

- a. dangerous to cross
- b. a region
- c. a point
- d. perpendicular

2. A linear equation is always written with two variables -

- a.  $m$  and  $b$
- b.  $x$  and  $y$
- c.  $a$  and  $b$
- d.  $m$  and  $x$

3. The solution of two inequalities will be

- a. a point
- b. parallel
- c. a region
- d. infinite

4. How many answers will there be for the solution to a set of linear equations:

- a. 0, 1 or infinite
- b. 1, 2 or 4
- c. 1
- d. none

5.

What is the solution for this equation?

$$|2x - 3| = 5$$

- A  $x = -4$  or  $x = 4$
- B  $x = -4$  or  $x = 3$
- C  $x = -1$  or  $x = 4$
- D  $x = -1$  or  $x = 3$

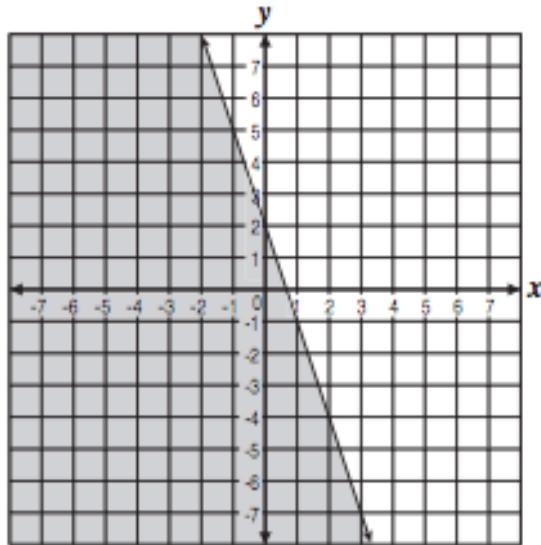
6.

What is the  $y$ -intercept of the graph of  $4x + 2y = 12$ ?

- A  $-4$
- B  $-2$
- C  $6$
- D  $12$

7.

Which inequality does the shaded region of the graph represent?

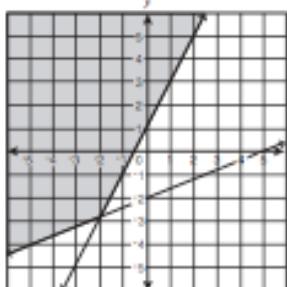


- A  $3x + y \leq 2$
- B  $3x + y \geq 2$
- C  $3x + y \leq -2$
- D  $3x + y \geq -2$

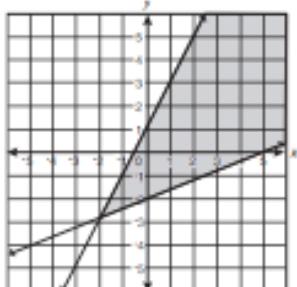
8.

Which graph *best* represents the solution to this system of inequalities?

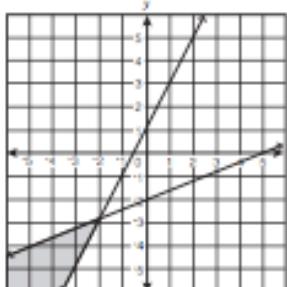
$$\begin{cases} 2x \geq y - 1 \\ 2x - 5y \leq 10 \end{cases}$$



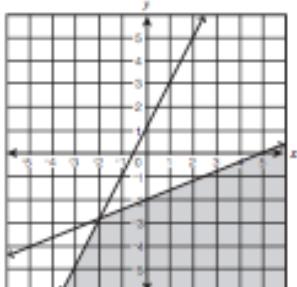
A



C



B



D

9.

What is the solution to this system of equations?

$$\begin{cases} y = -3x - 2 \\ 6x + 2y = -4 \end{cases}$$

- A (6, 2)
- B (1, -5)
- C no solution
- D infinitely many solutions

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10.

Which ordered pair is the solution to the system of equations below?

$$\begin{cases} x + 3y = 7 \\ x + 2y = 10 \end{cases}$$

A  $\left(\frac{7}{2}, \frac{13}{4}\right)$

B  $\left(\frac{7}{2}, \frac{17}{5}\right)$

C  $(-2,$

D  $(16, -3)$

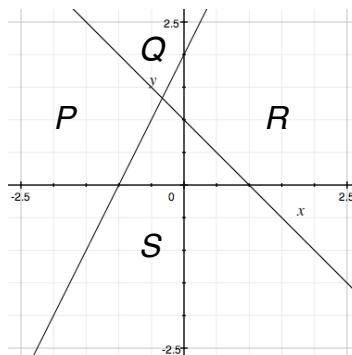
11.

Which of the following *best* describes the graph of this system of equations?

$$\begin{cases} y = -2x + 3 \\ 5y = -10x + 15 \end{cases}$$

- A two identical lines
- B two parallel lines
- C two lines intersecting in only one point
- D two lines intersecting in only two points

12.  $\begin{cases} y \geq 2x + 1 \\ y \leq -x + 1 \end{cases}$



Which region is a solution to the set of equations?

- a. P
- b. Q
- c. R
- d. S